

Borehole Management in the Pharmaceutical Industry

Our trusted relationship with our global pharmaceutical client spans 25 years, with Envireau Water initially approached for expert hydrogeological support in 1997.

For our clients to manufacture and deliver vital medicine and vaccines throughout the world a sustainable water supply is a necessity. Over the years our specialist team have worked pragmatically to assess resource availability and implement monitoring schemes that demonstrate the longevity of the water supply to the regulator and secure the future of manufacturing operations.



Our Working Relationship

Our client operates a 3-borehole wellfield targeting a principal aquifer to provide water for use in production, process and cooling. Our relationship began on the back of regulatory and technical queries relating to the abstraction of groundwater.

Duration:

1997
-
Present

Contract value:

£250,000



Technical & Regulatory Support

In the late 1990's, the Environment Agency (then, the NRA) raised concerns about the sustainability of the abstraction due to potential impacts of abstraction on local groundwater resources and other nearby abstractors.

Envireau Water reviewed the available information and developed a hydrogeological conceptual model that strongly suggested, due to site specific geology, that future abstraction was sustainable and unlikely to impact other nearby abstractors.

A high level of regulatory engagement was required to allay the Environment Agency's concerns. The conceptual model was validated through a detailed programme of scientific data collection, using the existing borehole sources and new monitoring boreholes. The data collection exercise was carefully designed and managed by Envireau Water and agreed with the Environment Agency's technical team to ensure it met the regulatory objectives, without being excessively complicated or unduly expensive.

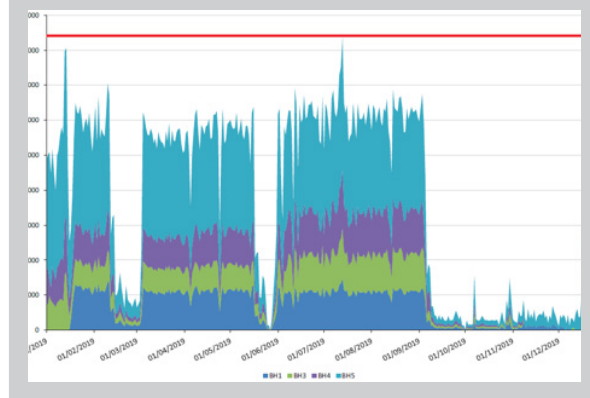
Although the Environment Agency's concerns were addressed, it was agreed that ongoing monitoring of groundwater levels in the aquifer would be carried out to confirm the sustainability of the abstraction.



State-of-the-Art Monitoring Systems

For more than 20 years, Envireau Water has carried out groundwater monitoring for our client. In 2013, telemetry equipment was introduced to collect data remotely and make it available in 'real time'. The use of telemetry allows the data to be checked and reported on frequently, preventing data losses and allowing any issues to be quickly investigated and addressed.

The data collected provides a very a robust evidence base for our client to demonstrate the sustainability of abstraction. Given that water is a business-critical resource, the data provides confidence that abstraction can be maintained now and in the future.



Borehole Engineering

The concerns about sustainability of the groundwater resource were indirectly related to the condition of the production boreholes, which were producing very fine sand that was causing damage to process equipment. The problem arose because the boreholes were unlined through the aquifer.

Envireau Water carried out a programme of test pumping and scientific analyses of the produced sand to design a screen and filter pack that was installed in the boreholes to alleviate the problem, without impacting the output from the boreholes.

Pharmaceuticals differ to other manufacturing industries due to the high level of quality assurance required in every aspect of their operating procedures to ensure process validation. The design of the screen and filter pick had to take this into account, to ensure that the materials used within the boreholes were suitable for use and would not affect or present a risk to production.



Need our help?

Our team has extensive experience of managing borehole wellfields, and we understand the way in which the pharmaceuticals industry works.

We help our clients to abstract water sustainably, ensuring that regulatory objectives are met, and that boreholes are correctly engineered to provide many years of reliable service. We are accustomed to dealing with complex regulatory scenarios and use appropriate levels of science and technical expertise to gather the evidence required to robustly address concerns.

If you are experiencing a similar problem, get in touch with our technical lead phil@envireauwater.co.uk or contact 01332 871 882.



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